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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,437	10/18/2000	Michel K. Susai	2006579-0454 (CTX-170)	3741

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CHOATE, HALL & STEWART / CITRIX SYSTEMS, INC.
TWO INTERNATIONAL PLACE
BOSTON, MA 02110

EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

MAIL DATE	DELIVERY MODE
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07/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/690,437

Applicant(s)

SUSAI ET AL.

Examiner

Dohm Chankong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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DETAILED ACTION

1> This action is in response to Applicant's amendment, filed 5.11.2007. Claims 1-8 are cancelled. Claims 9-44 are added. Claims 9-44 are presented for further examination.

2> This is a final rejection.

Response to Arguments

3> Applicant's arguments with respect to claims 9-44 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4> Claims 17 and 35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the claims recite that the interface unit determining whether the client and server have not transferred at least a last byte of data. The Office was unable to find any support for the claim language within Applicant's specification that supports this recited

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functionality. There is some language that recites the functionality of "the sequence number plus one of the last successfully received bytes of data" [Applicant's specification, pg. 10, lines 10-18]. However, it is not clear that the claim language is supposed to refer to this feature recited in the specification. For example, the claim language could be interpreted as determining whether the actual final byte of data as part of a data transfer has been transferred. The claims should be amended to more clearly reflect the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5> Claims 9-13, 21, 24-31, 39 and 42-44 are rejected under 35 U.S.C §103(a) as being unpatentable over Batra, U.S Patent No. 6,105,067.

6> As to claim 9, Batra discloses a method of polling by an interface unit a transport layer connection to a server, the method comprising the steps of:

a. receiving, by an interface unit, a first request of a first client to access a server, the first client and the interface unit communicating via a first transport layer connection [Figure 5 «items 400, 410» | column 3 «lines 5-19» where : Batra's connection manager is analogous to the claimed interface unit];

- b. identifying, by the interface unit that the interface unit has a second transport layer connection established with the server indicated by the first request [column 8 «lines 26-40» : requesting an existing connection from the pool to a specific data server];
- c. determining, by the interface unit, that a second client and the server are not transferring data for a second request via the second transport layer connection [Figure 5 «item 510» | column 8 «lines 41-44» where : the connection manager determines whether any of the existing connections are available for use. This functionality implies a determination as to whether any data is being transferred over the connection (see Figure 5 «item 520» which marks as “used” any connection that is being used for data transfer)];
- d. transmitting, by the interface unit, the first request via the second transport layer connection in response to the determination of step (c) [Figure 5 «item 420» | column 8 «lines 26-40»];
- e. determining, by the interface unit, that the second client and the server are transferring data for the second request via the second transport layer connection in response to receiving a third request from one of the first client or the second client to access the server [Figure 5 «item 510» | column 3 «lines 54-62» | column 8 «lines 41-44»];
- f. establishing, by the interface unit, a third transport layer connection with the server in response to the determination of step (e) [column 8 «lines 41-46»].

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7> As to claim 10, Batra discloses receiving, by the interface unit, the second request to access the server via one of the first client, the second client or a third client [Figure 4 «items 60, 62» | column 8 «lines 41-44» | column 10 «lines 12-17» where : upon receiving an incoming request, the manager checks to see if any connections are already “in-use”].

8> As to claim 11, Batra discloses intercepting, by the interface unit, one of the first request, the second request or the third request [Figure 5 «item 410»].

9> As to claim 12, Batra discloses step (b) comprising identifying, by the interface unit, the server from a destination internet protocol address of a network packet of the first request [column 2 «lines 47-52» | column 9 «lines 37-42»].

10> As to claim 13, Batra discloses step (b) comprising identifying, by the interface unit, the server from a path name of the first request [column 9 «lines 25-42» where : “the subpool name then identifies that data server”].

11> As to claim 21, Batra discloses step (f) comprising waiting, by the interface unit, to use the second transport layer connection to transmit the third request [Figure 5 «item 530» | Figure 6 | column 9 «lines 43-59»].

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12> As to claim 24, Batra discloses receiving, by the interface unit, a response to the first request from the server via the second transport layer connection, and transmitting the response to the first client via the first transport layer connection [column 8 «lines 31-40»].

13> As to claim 25, Batra discloses one of the first, second or third request comprises a request to open a transport layer connection [column 8 «lines 41-47»].

14> As to claim 26, Batra discloses transmitting, by the interface unit, the third request via the third transport layer connection [column 10 «lines 50-57» where : it is implied that upon opening a new connection, the new connection is being used to serve the request].

15> As to claims 27-31, 39 and 42-44, as they are merely claims to an interface unit that implements the method of claims 10-13, 21 and 24-26, respectively, they are similarly rejected for at least the same reasons as set forth above.

16> Claims 14, 22, 23, 32, 40 and 41 is rejected under 35 U.S.C §103(a) as being unpatentable over Batra, in view of Gopal et al, U.S Patent No. 6.163.812 [“Gopal”].

17> As to claim 14, Batra does not expressly disclose receiving, by the interface unit, one of a finish command or a reset command from the second client.

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18> In the same field of invention, Gopal is directed towards an application that maintains a pool of unused connections in a connection pool [column 10 «lines 12-17»]. Gopal discloses that a client closes a connection by submitting a finish (FIN) packet [column 10 «lines 36-41»]. It would have been obvious to incorporate Gopal's teachings into Batra. One would have been motivated to modify Batra as Gopal would enhance Batra's functionality by providing connection closing capability through the use of the FIN packet.

19> As to claim 32, as it is merely a claim to an interface unit that implements the method of claim 14, it is similarly rejected for at least the same reasons as set forth above.

20> As to claims 22 and 23, Batra does not expressly disclose receiving an acknowledgement from the second client that data transfer has completed or transmitting the third request in response to receiving the acknowledgement.

21> Gopal discloses receiving an acknowledgement from the second client that data transfer has completed [column 10 «lines 36-41» : sending of a FIN command implies that all the data has been transferred]. It would have been obvious to one of ordinary skill in the art to incorporate Gopal's teachings into Batra. One would have been motivated to modify Batra as Gopal would enhance Batra's functionality by providing connection closing capability through the use of the FIN packet.

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22> As to claim 23, Batra discloses transmitting requests after a connection has been returned to the connection pool. According to Gopal, a connection is only returned to the pool upon receiving the acknowledgement from the client that the data transfer is complete [column 10 «lines 36-41»]. Therefore, Batra's teaching of transmitting a third request on a connection that is no longer "in-use" is done in response to the acknowledgement that the data transfer is complete.

23> As to claims 32, 40 and 41, as they are merely claims to an interface unit that implements the method of claims 14, 22 and 23, respectively, they are similarly rejected for at least the same reasons as set forth above.

24> Claims 15, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batra, in view of RFC 2616, Fielding et al. (hereinafter Fielding), June 1999.

25> Fielding was recited by the Office in the final rejection, filed 2.10.2006.

26> As per claim 15, Batra disclose the invention substantially as rejected in claim 1 above, but does not explicitly say means for utilizing a content length parameter to determine whether all of said information has been sent to said first client.

27> Essentially the claim is directed towards a means of detecting the end of transmitted information. Fielding teaches means for utilizing a content length parameter to determine

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whether all of said information has been sent to said first client (Fielding, 3.6.1. Chunked Transfer Coding, lines 1-6, it should be noted that the coding works bi-directional within any network).

It would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate Fielding teaching with Baskey because the combination would improve the accuracy and safe transport by utilizing a verification scheme (Fielding, Fielding, 3.6.1. Chunked Transfer Coding, lines 1-6; Fielding, 3.6 Transfer Codings, lines 1-5).

15. As per claims 16, 18 and 19 the claims are rejected for the same reasons as rejection to claim 15 above. Note that each chunk contains its own size fields.

28> Claims 17 and 35 are rejected under 35 U.S.C §103(a) as being unpatentable over Batra, in view of an Official Notice.

29> As to claim 17, Batra does not expressly disclose determining, by the interface unit, that the second client and the server have not transferred at least a last byte of data. However, Applicant's specification recites the use of sequence numbers when transferring data between a client and server [Applicant's specification, pg. 10, lines 10-18]. Applicant's specification recites use of the sequence numbers to determine the last successfully received byte of data. Applicant's specification merely recites well known features with respect to TCP and TCP segments.

It would have been obvious to one of ordinary skill in the art to use the well known

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features of the art, including TCP checksums and sequence numbers in order to determine the last received byte of data, and incorporate them into Batra's connection manager. Such a feature is well known in the art as it provides the ability to monitor data transfer between clients and servers and to insure that received data is in proper sequence.

30> As to claim 35, as it is merely a claim to an interface unit that implements the method of claim 17, it is similarly rejected for at least the same reasons as set forth above.

31> Claims 20 and 38 are rejected under 35 U.S.C §103(a) as being unpatentable over Batra, in view of Balabine, U.S Patent No. 6,631,417.

32> As to claim 20, Batra does not expressly disclose inserting, by the interface unit, information in the first request of the first client to indicate to the server to keep a transport layer connection.

33> In the same field of invention, Balabine is directed towards a connection manager that maintains persistent TCP connections within a connection pool [column 4 «lines 40-50»]. Balabine discloses inserting information in the first request of the first client to indicate to the server to keep a transport layer connection [column 4 «lines 51-60» | column 5 «lines 33-49»].

It would have been obvious to one of ordinary skill in the art to incorporate Balabine's

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teachings of a keep-alive header within a request into Batra's connection pool system. Such a feature is implied in Batra's system because Batra already discloses keeping open connections with the pool just like Balabine. Therefore, the keep-alive feature is implied within Batra's system as a means to keep open the connections, as taught by Balabine.

34> As to claim 38, as it is merely a claim to an interface unit that implements the method of claim 20, it is similarly rejected for at least the same reasons as set forth above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

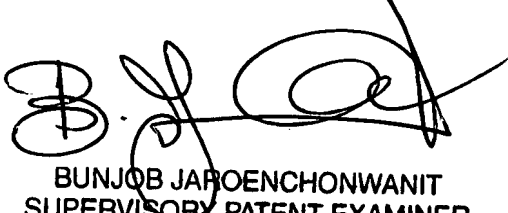
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC


BUNJOB JAROENCHONWANIT
SUPERVISOR PATENT EXAMINER

7/12/17